Consideration and allowance of the present application is most respectfully requested.

Respectfully submitted,

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Patent Claims

- 1. An electrode arrangement for an electrical component and carrier for sensors, which arrangement is applied on a substrate (1), this arrangement consisting electrically conductive electrodes (2), which are not electrically connected with one another, and a surface structure with suitable dimensions for the representation of the conductivities of the electrode arrangement and/or of the substance of a sensor-active layer by conductance of a measuring probe or of a function element, so characterized that on a dielectric substrate (1) between two electrodes (2) a number of conductive islands (3), which are not or are not essentially connected with one another, are applied as a two-dimensional area arrangement.
- 2. An electrode arrangement for an electrical component and 15 carrier for sensors, which arrangement is applied on a consisting substrate (1), this arrangement of (2), which are electrically conductive electrodes electrically connected with one another, and a surface structure with suitable dimensions for the representation 20 of the conductivities of the electrode arrangement and/or layer by the substance of a sensor-active conductance of a measuring probe or of a function element according to claim 1, so characterized that the structure (3) consists of islands a the conductive 25 distribution of conductive substances on any insulating substrate (1).
- 3. An electrode arrangement for an electrical component and carrier for sensors, which arrangement is applied on a substrate (1), this arrangement consisting of two electrically conductive electrodes (2), which are not electrically connected with one another, and a surface



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structure with suitable dimensions for the representation of the conductivities of the electrode arrangement and/or of the substance of a sensor-active layer by the conductance of a measuring probe or of a function element according to claims 1 [and 2], so characterized that the substance of the conductive islands (3) is firmly set on the substrate (1) and in particular it is sputtered on, steamed on, squirted on, dabbed on, imprinted or sprayed on.

- 4. An electrode arrangement for an electrical component and carrier for sensors, which arrangement is applied on a substrate (1), this arrangement consisting of two electrically conductive electrodes (2), which are not electrically connected with one another, and a surface structure with suitable dimensions for the representation of the conductivities of the electrode arrangement and/or of the substance of a sensor-active layer by the conductance of a measuring probe or of a function element according to claims 1 to 3 so characterized that the conductive islands (3) are arranged within special geometric figures.
- 5. An electrode arrangement for an electrical component and carrier for sensors, which arrangement is applied on a substrate (1), this arrangement consisting of two electrically conductive electrodes (2), which are not electrically connected with one another, and a surface structure with suitable dimensions for the representation of the conductivities of the electrode arrangement and/or of the substance of a sensor-active layer by the conductance of a measuring probe or of a function element according to claims 1 to 4, so characterized that the surface of the carrier for a sensor is coated with a material-selective substance.



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6. An electrode arrangement for an electrical component and carrier for sensors, which arrangement is applied on a substrate (1), this arrangement consisting (2), which are electrically conductive electrodes electrically connected with one another, and a structure with suitable dimensions for the representation of the conductivities of the electrode arrangement and/or sensor-active layer by of a of the substance conductance of a measuring probe or of a function element according to claims 1 to 5, so characterized that a carrier for the sensor with a sufficiently thin substrate (1) has a sensor-active layer on all sides.

- 7. An electrode arrangement for an electrical component and carrier for sensors, which arrangement is applied on a substrate (1), this arrangement consisting electrically conductive electrodes (2), which not electrically connected with one another, and a surface structure with suitable dimensions for the representation of the conductivities of the electrode arrangement and/or of layer by the substance of а sensor-active conductance of a measuring probe or of a function element according to claim $\left\{ 1 \right\}$ to $\left\{ 6 \right\}$, so characterized that the conductive islands (3) in their short-range order show hyperstructures with anisometries of the substances with respect to the substrate.
- 8. An electrode arrangement for an electrical component and carrier for sensors, which arrangement is applied on a substrate (1), this arrangement consisting of two electrically conductive electrodes (2), which are not electrically connected with one another, and a surface structure with suitable dimensions for the representation of the conductivities of the electrode arrangement and/or



of the substance of a sensor-active layer by the conductance of a measuring probe or of a function element according to claims 1[to 7], so characterized that isotropic structures of conductive islands (3) with ring-shaped electrodes (2) are arranged on the substrate (1).

9. An electrode arrangement for an electrical component and carrier for sensors, which arrangement is applied on a substrate (1), this arrangement consisting of electrically conductive electrodes (2), which are not electrically connected with one another, and a surface structure with suitable dimensions for the representation of the conductivities of the electrode arrangement and/or substance of a sensor-active layer by the of the conductance of a measuring probe or of a function element according to claims 1 to 8, so characterized that the electrode arrangement is designed as a large area as a function element in particular as panel heating elements or photo cells.

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